

# BASIC MACHINE

## UPPER MACHINERY

### POWER PLANT:

#### Diesel:

Perkins 6-354 (Standard).....	95 hp @ 2,200 rpm
G.M., 4-53, 4 cyl. (optional extra) .....	88 hp @ 2,200 rpm
Mitsubishi 6DB 10C-K (optional extra) .....	95 hp @ 1,600 rpm
Cummins NHC-4-CI (N-495-C130) (opt. ext.).....	89 hp @ 1,600 rpm

**TRANSMISSION:** 2-speed, second gear normal operating speed.

**FUEL TANK:** ..... 220 l (58 gallons)

**THROTTLE:** Hand grip control for all operations, standard.

**CONTROLS:** Direct acting hydraulic.

**SWING CLUTCHES:** Two shoe type, internal expanding.

**CLUTCHES:** Band type, internal expanding.

**BRAKES:** Band type, external contracting.

**BOOM HOIST ASSEMBLY:** Independent planetary gear type, with external ratchet and automatic brake provides for raising and lowering boom under power and locking boom. Drum mounted on anti-friction bearings.

Boom hoist line speed (raising)..... 48 m/min. (157 fpm)

Boom hoist line speed (lowering)..... 28 m/min. (92 fpm)

**MAIN OPERATING DRUMS:** Drums opposite each other mounted on antifriction bearings on single drum shaft. See attachment sheets for further details.

**THIRD DRUM:** Mounts on L.H. extension of independent boom hoist drum shaft (opposite boom hoist drum). Does not interfere with any other machine function. Available for application to all machines with crane boom type attachments, optional extra.

**GANTRY:** High gantry folding type.

**COUNTERWEIGHT:** Internal non-removable punchings in counterweight box at rear of machine and external single piece removable casting for all attachments. See attachment specs. for details.

**TYPE OF FASTENING TO LOWER:** Six adjustable hook rollers. Two double rear, one double hook rollers front.

**SWING ROLLERS:** 28 rollers in live roller circle.

**SWING GEAR:** Internal cut teeth.

**ROTATING SPEED:** ..... 4.3 rpm

**SWING BRAKE:** Mechanical, friction type

## LOWER MACHINERY

**TRACTOR TYPE CRAWLERS, STANDARD:** Automatic spring-loaded track tension. Ten lower rollers in each frame, with double rolling surfaces ..... Dia. 178 mm (7")

**CRAWLER DRIVE:** Spring loaded double acting propel and steering brakes release automatically under engine power when traveling; set automatically when propelling power not applied. Independent travel, standard.

**STEERING MECHANISM:** Sliding jaw clutches, one on each side control application of propelling power to each crawler. When either side is disengaged, propel brake on that side remains set, thus locking that crawler.

### TRAVEL SPEED:

Normal..... 1.60 km/h (1.00 mph)

In low range ..... 0.90 km/h (0.56 mph)

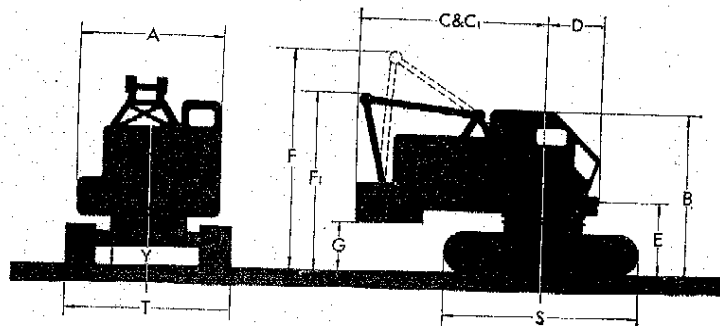
### CRAWLER SHOES:

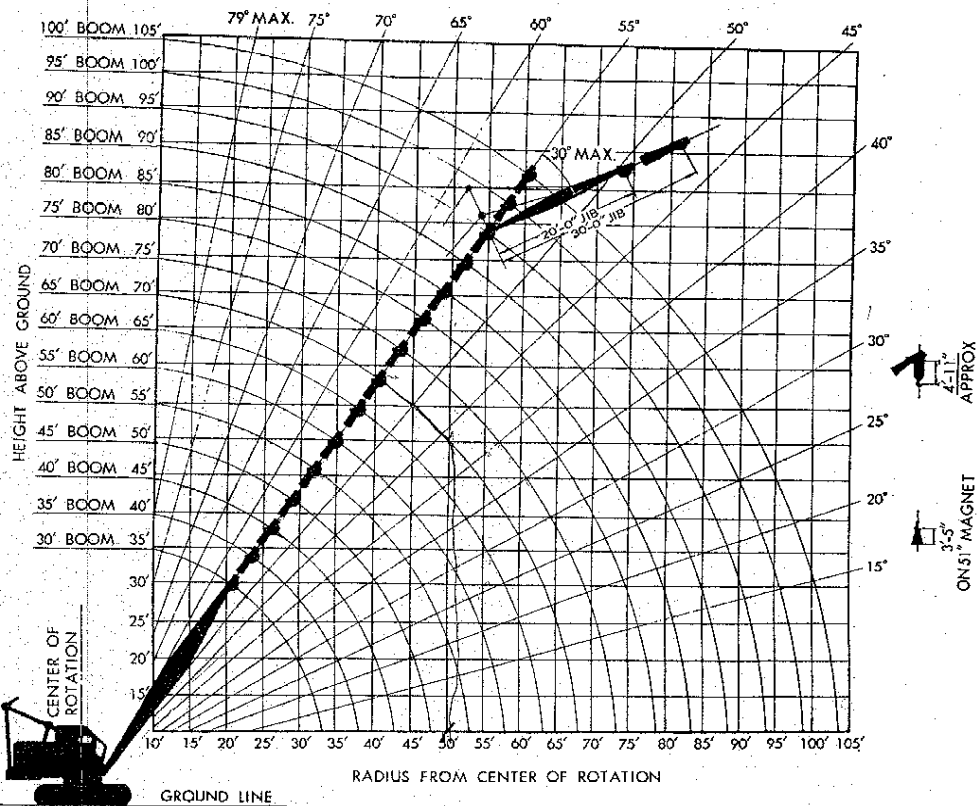
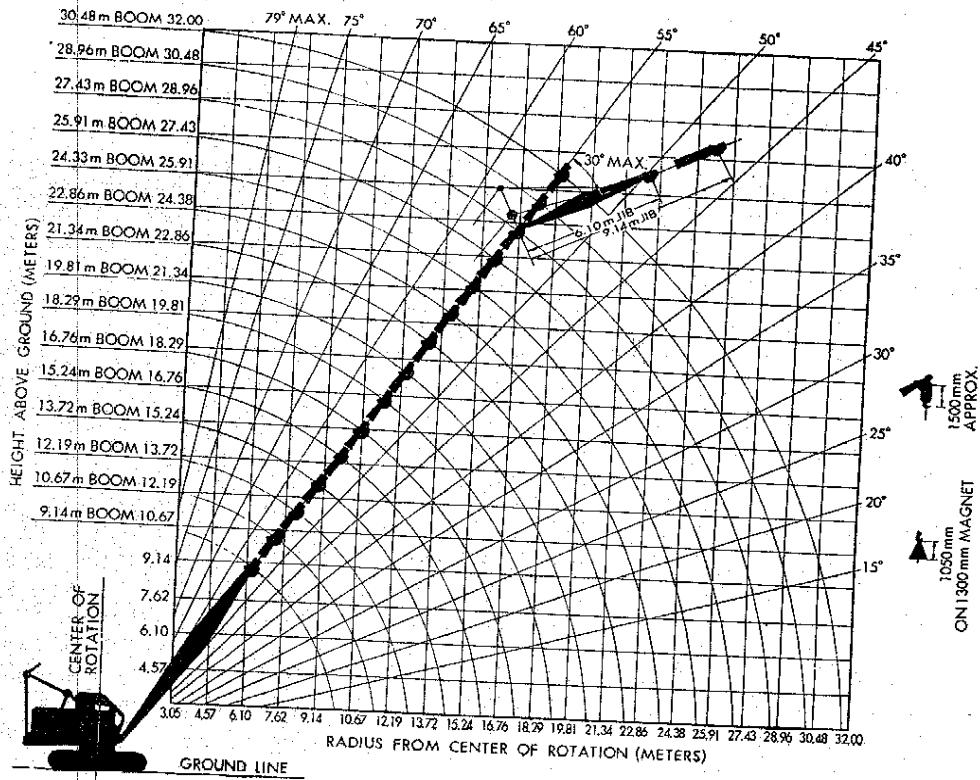
Total number—both sides ..... 108

Forged flats—available in width of ..... 590 mm (24") and 760 mm (30")

## GENERAL DIMENSIONS

A—Width of cab .....	2.69 m (8'-10")
B—Height to top of cab .....	3.16 m (10'-4 $\frac{3}{8}$ ")
C—Radius of rear end .....	3.41 m (11'-2 $\frac{1}{4}$ ")
C <sub>1</sub> —Radius of rear end (Gantry folded).....	3.41 m (11'-2 $\frac{1}{4}$ ")
D—Center of rotation to boom foot pin .....	1.00 m (3'-3 $\frac{3}{8}$ ")
E—Height from ground to boom foot pin .....	1.45 m (4'-9 $\frac{1}{8}$ ")
F—Clearance height over gantry .....	4.19 m (13'-9")
F <sub>1</sub> —Clearance height over gantry (Gantry folded) .....	3.20 m (10'-6")
G—Counterweight ground clearance .....	0.92 m (3'- $\frac{1}{4}$ ")
S—Overall length of crawlers .....	4.60 m (15'-1 $\frac{1}{8}$ ")
Center to center of sprockets .....	3.78 m (12'-4 $\frac{7}{8}$ ")
T—Overall width of crawlers with shoes as indicated.....	3.03 m (9'-11 $\frac{5}{8}$ ")
Shoe width standard (forged flat shes) .....	590 mm (24")
Y—Ground clearance of carbody (lowest point).....	368 mm (1'-2 $\frac{1}{2}$ ")





# CRANE 27.2 Metric Ton SPECIFICATIONS

## P&H CRANE ATTACHMENT

The P&H boom has lattice-type, all-welded construction of high strength alloy steel which provides the strongest crane boom available with the lowest relative weight.

- The P&H open-throat design provides greater load clearance. Boom point sheaves ride on bronze sleeve bearings for longer wear.
- Booms feature an "offset" head for added clearance factor which gives increased lifting height for each boom length.
- P&H bolt connections permit fast, easy erection and takedown.

## GENERAL DATA

- BOOM:** Angle lattice alloy steel construction.  
Basic length, open throat and bolt connected  
in two equal sections ..... 9.14m (30')
- With two offset boom point sheaves on bronze sleeve bearings, bottom diameter ..... 451 mm (17 3/4")  
12 part boom hoist reeving, standard.
- HOOK BLOCK** ..... 27.2 tons  
One sheave with swivel hook for 1-3 part hoist line.  
Four & five part hoist line standard.
- POWER CONTROLLED LOAD LOWERING:** Planetary device for lowering load under power (left hand grooved drum), optional extra.
- GANTRY:** High gantry folding type.
- WORKING WEIGHT:** (including block) ..... 27,300 kg (60,200 lbs.)  
(6,900 kg (15,200 lbs.) counterweight included in weight, furnished as standard.)

## DRUM SHAFT ASSEMBLY

**Lifting Crane Drums	Cable Dia.	Max. Cable Capacity	*Line Pulls	*Line Speeds
L.H. 400 mm (15 3/4") P.D.	20 mm (3/4")	130 m (430 Ft)	7,450 kg (16,400 lbs)	48 m/min (157 Fpm)
R.H. 400 mm (15 3/4") P.D.	20 mm (3/4")	130 m (430 Ft)	7,450 kg (16,400 lbs)	48 m/min (157 Fpm)

\*Line pulls and line speeds based on single line in normal operating (2nd) gear, to fit job requirements, line pull and line speed can be varied by shifting into other gears.

\*\*L.H. grooved drum (crane with power lowering); R.H. grooved drum.

## GROUND PRESSURES

Shoe Width in Inches	590mm (24)	760mm (30)
Lbs. per Sq. Inch	0.56kg/cm <sup>2</sup> (8.0)	0.45kg/cm <sup>2</sup> (6.4)

## MODEL 325 CRANE RATING IN KG (LBS.)

Radius in Meters (Feet)	9.14m (30') Boom		12.19m (40') Boom		15.24m (50') Boom		18.29m (60') Boom		21.34m (70') Boom		24.38m (80') Boom		27.43m (90') Boom		30.48m (100') Boom	
	Over Side	Over End	Over Side	Over End	Over Side	Over End	Over Side	Over End	Over Side	Over End	Over Side	Over End	Over Side	Over End	Over Side	Over End
3 (9.84)	24,700 (54,340)	27,220 (60,000)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3.5 (11.50)	19,200 (42,240)	22,150 (48,730)	19,120 (42,060)	22,070 (48,550)	...	...	...	...	...	...	...	...	...	...	...	...
4 (13.12)	15,600 (34,320)	17,780 (39,120)	15,520 (34,140)	17,700 (38,940)	15,440 (33,970)	17,620 (38,760)	...	...	...	...	...	...	...	...	...	...
4.5 (14.70)	13,100 (28,820)	14,860 (32,690)	13,020 (28,640)	14,780 (32,520)	12,940 (28,470)	14,700 (32,340)	12,860 (28,290)	14,620 (32,160)	...	...	...	...	...	...	...	...
5 (16.40)	11,300 (24,860)	12,720 (27,980)	11,220 (24,680)	12,640 (27,810)	11,140 (24,510)	12,560 (27,630)	11,060 (24,330)	12,480 (27,460)	10,980 (24,160)	12,400 (27,280)	...	...	...	...	...	...
6 (16.98)	8,780 (19,320)	9,830 (21,630)	8,700 (19,140)	9,750 (21,450)	8,620 (18,960)	9,670 (21,270)	8,540 (18,790)	9,590 (21,100)	8,460 (18,610)	9,510 (20,920)	8,380 (18,440)	9,430 (20,750)	...	...	...	...
7 (22.96)	7,160 (15,750)	7,960 (17,510)	7,080 (15,580)	7,880 (17,340)	7,000 (15,400)	7,800 (17,160)	6,920 (15,220)	7,720 (17,000)	6,840 (15,050)	7,640 (16,810)	6,760 (14,870)	7,560 (16,630)	6,680 (14,700)	7,480 (16,460)	6,600 (14,520)	7,400 (16,280)
8 (26.24)	6,010 (13,220)	6,650 (14,630)	5,930 (13,050)	6,570 (14,450)	5,850 (12,870)	6,490 (14,280)	5,770 (12,690)	6,410 (14,100)	5,690 (12,520)	6,330 (13,930)	5,610 (12,340)	6,250 (13,750)	5,530 (12,170)	6,150 (13,570)	5,450 (11,990)	6,050 (13,400)
9 (29.52)	5,150 (11,330)	5,700 (12,540)	5,070 (11,150)	5,620 (12,368)	4,990 (10,980)	5,540 (12,190)	4,910 (10,800)	5,460 (12,010)	4,830 (10,630)	5,380 (11,840)	4,750 (10,450)	5,300 (11,660)	4,670 (10,270)	5,220 (11,480)	4,590 (10,100)	5,140 (11,310)
10 (32.80)	...	...	4,800 (10,740)	5,350 (11,780)	4,720 (10,560)	5,270 (11,600)	4,640 (10,380)	5,190 (11,420)	4,560 (10,210)	5,110 (11,240)	4,480 (9,980)	5,030 (11,060)	4,400 (9,800)	4,950 (10,880)	4,870 (10,700)	4,790 (10,520)
12 (39.37)	...	...	3,440 (7,570)	3,820 (8,400)	3,360 (7,390)	3,740 (8,230)	3,280 (7,220)	3,660 (8,050)	3,200 (7,040)	3,580 (7,880)	3,120 (6,860)	3,500 (7,700)	3,040 (6,690)	3,420 (7,520)	3,340 (7,340)	3,260 (7,160)
14 (45.93)	...	...	...	...	2,720 (5,980)	3,010 (6,620)	2,640 (5,810)	2,930 (6,450)	2,560 (5,630)	2,850 (6,270)	2,480 (5,460)	2,770 (6,090)	2,400 (5,280)	2,690 (5,920)	2,320 (5,100)	2,610 (5,740)
16 (52.49)	...	...	...	...	...	...	2,150 (4,730)	2,410 (5,300)	2,070 (4,550)	2,330 (5,130)	1,990 (4,380)	2,250 (4,950)	1,910 (4,200)	2,170 (4,770)	1,830 (4,030)	2,090 (4,600)
18 (59.00)	...	...	...	...	...	...	...	...	1,710 (3,760)	1,930 (4,250)	1,630 (3,590)	1,850 (4,070)	1,470 (3,240)	1,770 (3,900)	1,470 (3,240)	1,690 (3,720)
20 (65.60)	...	...	...	...	...	...	...	...	1,420 (3,120)	1,610 (3,540)	1,350 (2,970)	1,530 (3,370)	1,270 (2,790)	1,450 (3,190)	1,190 (2,620)	1,370 (3,010)
24.4 (54.10)	...	...	...	...	...	...	...	...	...	...	...	...	750 (1,650)	910 (2,000)	670 (1,470)	830 (1,830)

Operating radius is horizontal distance from centerline of rotation to a vertical line through the gravity center of the load. The gross crane ratings shown do not exceed 75% of tipping loads with the machine standing on a firm, level, uniformly supporting surface. These crane ratings include weight of hook, blocks, slings and all other crane handling accessories. Backstops recommended for all boom lengths. Ratings are contingent upon machine being equipped with proper P&H boom. Deduct 450 kg (1,000 lbs.) from main boom ratings when boom is equipped with jib.

## MAXIMUM JIB RATINGS IN KG (LBS.)

Offset Angle Jib to Boom under Full Load	6.10m (20') Jib	9.14m (30') Jib
10°	4,540 (10,000)	3,630 (8,000)
20°	4,090 (9,000)	3,180 (7,000)
30° (max.)	3,630 (8,000)	2,720 (6,000)

Jib ratings at any radius from center of rotation are the same as crane ratings shown in table for main boom when operated at that radius, but do not exceed maximum jib ratings shown. For bucket ratings on jib, deduct 10% from maximum jib ratings. Maximum jib operating radius not to exceed length of main boom on which it is being used.

## HOIST REEVING

No. of Parts of Line	1	2	3	4	5	6
Max. Load—lbs. (kg)	4,540 (10,000)	9,080 (20,000)	13,620 (30,000)	18,160 (40,000)	22,700 (50,000)	27,220 (60,000)

## MAXIMUM BOOM LENGTHS—MACHINE CAN LIFT OFF GROUND IN M (FT.-INS.)

Side and End	Boom and Jib	
	Boom Only	Boom and Jib
30.48 (100-0)	30.48 (100-0)	27.42 + 9.14 (90-0 + 30-0)